IN THE SPECIFICATION:

Please amend the specification as follows:

Please replace the paragraph from page 1, line 26 to page 2, line 9, as follows:

However, as devices get smaller, the photomask pattern becomes finer. Fine patterns diffract light and thus detract from imaging the photomask onto the surface of a wafer. FIG. 1a shows what happens when a photomask with a fine pattern 6 having a high frequency (pitch 2d is about several microns), is illuminated through a projection lens system 7. The fine pattern 6 is illuminated along a direction perpendicular to the surface thereof and it diffracts the light that passes through the mask 6. Diffraction rays 3 - 5 caused by the pattern include a zero-th order diffraction ray [[5]] 4 directed in the same direction as the direction of advancement of the input ray, and higher order diffraction rays such as positive and negative first order diffraction rays 3, [[4]] 5, for example, directed in directions different from the input ray. Among these diffraction rays, those of particular diffraction orders such as, for example, the zero-th order diffraction ray and positive and negative first order diffraction rays 3, 5, are incident on a pupil 1 of the projection lens system 7. Then, after passing through the pupil 1, these rays are directed to an image plane of the projection lens system, whereby an image of the fine pattern 6 is formed on the image plane. In this type of image formation, the ray components which are contributable to the contrast of the image are higher order diffraction rays. If the frequency of a fine pattern increases, it raises a problem that an optical system does not receive higher order diffraction rays. Therefore, the contrast of the image degrades and, ultimately, the imaging itself becomes unattainable.

Please change the paragraph at page 14, lines 6-25 to read as follows:

A square or rectangular shaped obscuration (or an inner limiting zone) emphasizes the off-axis illumination for feature pitch values whose frequency distribution falls beyond the chosen value (greater than *lambda/(w*NA)* where *w* is the full width obscuration value between 0 and 2). This is shown in Figure 21 for a ~~gaussian~~ Gaussian off axis distribution where the obscuration is 30% of the full aperture width. Combining a square outer limiting zone and a square obscuration, an optimal condition of off axis illumination exists also. For features oriented in ~~on~~ one direction only, only two zones are needed on an axis opposite to the feature direction. These zones can be slots or rectangles since spreading of energy in the direction of feature orientation is of no consequence to imaging performance and increases throughput. With two dimensional geometry, four slots are needed in x and y direction, resulting in a square ring, as shown in Figure 22. This ring can also be considered as the combination of a square

limiting zone and square obscuration. This rectangular ring source distribution can deliver off-axis illumination for features to *0.25lambda/NA*, depending on the choice of the limiting outer square zone. This square ring source distribution can also be combined with other off axis approaches, such as a ~~gaussian~~ <u>Gaussian</u> four-zone design. Figure 23 shows how a square ring source distribution is added to a ~~gaussian~~ <u>Gaussian</u> four-zone design to produce results that are common to both approaches (that is better performance for more dense features out to *0.25lambda/NA* and adequate through focus and through pitch imaging performance).

Please change the paragraph at page 19, line 26 to page 20, line 2 to read as follows:

Those skilled in the art will also understand that the new results achieved with elliptical, 45 degree elliptical, square rings, and square shaped zone may also be achieved with diffractive optical element approaches to beam shaping, such as that described in U.S. Patent No. 5,926,257 and U. S. Patent No. 5,631,721 by tailoring the diffractive optical elements to exhibit these characteristics. The micro-diffractive optical elements within the beam-shaping optical system (2) in Figure 25 are manipulated to allow for the required shaping. It is well known that diffractive optical elements (DOEs) and ~~halographic~~ <u>holographic</u> optical elements (HOEs) can allow for efficient manipulation of arbitrary wavefronts with more flexibility and reduced fabrication requirements compared to conventional refractive optics (see for instance Z. Yang and K. Rosenbruch, SPIE Vol. 1354, (1990), 323). One DOE or HOE or the combination of two or more DOEs or HOEs allow for the design flexibility needed to achieve the desired results, as demonstrated for instance in U.S. Patent No. 5,926,257 and in SPIE Vol. 1354, (1990), 323.